Research on HIV and General Populations in Pakistan

In order to successfully treat and prevent the spread of HIV/AIDS, it is important that the general population be aware of and educated on the topic. As such, it is one of the goals of the HIV/AIDS Education Project in Pakistan to spread HIV awareness among the people of Pakistan and make research relating to HIV/AIDS more available to the people of Pakistan. This PDF contains a growing list of research articles describing studies delving into HIV and its impact on the general population of Pakistan.

Burden of HIV Infection among Rural and Urban Population of District Swabi, Khyber Pakhtunkhwa Pakistan

Zareen, Shehzad, et al. "Burden of HIV infection among rural and urban population of district Swabi, Khyber Pakhtunkhwa Pakistan." *J. Entomol. Zool. Stud.* 4(4), 1084-1088 (2016). (Link to Full Article)

Abstract

HIV (human immunodeficiency virus) is the causative agent of lowering down human immunity and causes a complication called acquired immunodeficiency syndrome (AIDS). Humoral and cellular immunity is directed by CD4 T lymphocytes. The current study was conducted in rural and urban areas of Swabi, Khyber Pakhtunkhwa province of Pakistan. About 200 blood samples were collected from susceptible males and females as directed by physicians for the diagnosis of HIV infection. RDT was used for HIV screening. A high prevalence (19.04%) was found in youngsters, elevated prevalence of HIV was observed in male population of Total. This study indicates that Population with low monthly income is more affected by HIV as compare to high monthly income. Married populations are at higher risk of HIV infection. Dental care services are considered to be more prone to HIV infection as there is a use of dental equipment which must be sterilized.

Assessment of Different Modes of Transmission of HIV in Patients with HIV/AIDS

Tahir, Nafisa Batool, et al. "Assessment of different modes of transmission of HIV in patients with HIV/AIDS." *Gomal J. Med. Sci.* 13(3), 162-65 (2015). (Link to Full Article)

Abstract

Background: HIV infection can be transmitted via a variety of ways. The objectives of this study were to determine the frequency distribution of gender, age grouping, marital status, and mode of transmission in HIV/AIDS patients.

Material & Methods: This cross-sectional study was conducted in ARV Center of DHQ Teaching Hospital, Kohat, Pakistan from 1st September 2013 to 28th February 2014. A sample of 165 cases of HIV/AIDS was enrolled through consecutive sampling. Data was collected by using close ended questionnaire. The demographic variables were gender, age grouping, and marital status while research variable was mode of transmission of HIV. Age grouping was ordinal, and the other two were nominal data. All data were analyzed for frequency, percentage, and mode through IBM SPSS V.21 (IBM Corp., Armonk, NY).

Results: Out of 165 patients, 109(66%) were male and 56(34%) female. The modal age group was of 20-29 years with 33 male and 17 female. Out of 165 patients, 109 (66%) were married with 66 (60.55%) male and 43 (39.45%) female. The mode of transmission was commercial sex in 114 (69.09%) of the study subjects, blood transfusion in eight (4.85%), mother to child transmission in six (3.64%), Injecting Drug Use (IDU) in 13 (7.88%), unknown in 23 (13.94%) cases and surgical/ dental procedures in one (0.61%) case. The modal mode of transmission was commercial sex.

Conclusion: Sexual transmission through commercial sex is the largest mode of transmission of HIV in our setup. Male are affected more than female due to risky sexual practices.

Prevalence and Risk Factors of HIV in Faisalabad, Pakistan – A Retrospective Study

Maan, Muhammad Arif, et al. "Prevalence and risk factors of HIV in Faisalabad, Pakistan – A retrospective study." *Pak. J. Med. Sci.* 30(1), 32-35 (2014). (Link to Full Article)

Abstract

Background & Objective: Although the magnitude of HIV in Pakistan has been well documented, but no record of HIV prevalence in Faisalabad region exists. A retrospective study was carried out at Sexually Transmitted Infections (STIs) clinic, District Headquarter (DHQ) hospital, Faisalabad, Pakistan to find out the prevalence of HIV and related risk factors.

Methods: Between March, 2010 and December, 2012, a total of 31040 subjects were either interviewed or their medical records were reviewed. From those recruited by convenient sampling method, written informed consent was obtained and informed about the study protocol. Blood serum was tested for antibodies to HIV-1 and HIV-2 (Enzyme-linked immunosorbent assay, Western Blot).

Results: On the whole, Anti-HIV was demonstrated in 173 (0.557%) of the respondents. This gives an overall HIV prevalence of 557 per 100,000.Averaged age of the patients was 49.5 years (range: 30-45) with 85.55% male. Majority of the patients were urban dwellers (87.28%), divorced or widowed (46.82%) and uneducated (50.28%). A large proportion (78%) of the patients was injection drug users. Compared to blood donation/transfusion and sexual interactions, injection drug use was the major potential risk factor for HIV infection.
Conclusion: Most important finding was higher HIV prevalence in Faisalabad region as compared to the previous assessments at the national level. This reflects an alarming situation necessitating contextual preventive interventions. Precarious practices such as injection drug abuse, blood donation/transfusion needs to be amended and extramarital sexual contacts should be avoided.

Screening for HIV among Tuberculosis Patients: a Cross-Sectional Study in Sindh, Pakistan

Hasnain, Jamshed, et al. "Screening for HIV among tuberculosis patients: a cross-sectional study in Sindh, Pakistan." *BMJ Open* 2(5), e001677 (2012). (Link to Full Article)

Abstract
Objective: To describe feasibility and results of systematic screening of tuberculosis (TB) patients for HIV.
Design: Cross-sectional study. Setting: Six selected sentinel sites (public DOTS clinics) in the province of Sindh, Pakistan.
Participants: All TB patients aged 16–60 years registered for treatment from April 2008 to March 2012.
Measurement: Demographic information of registered TB patients, screening for HIV through rapid testing and confirmation by referral lab of Sindh AIDS Control Program, according to national guidelines.
Results: Of a total of 18 461 registered TB patients, 12 882 fulfilled the inclusion criteria and were given education and counselling. Of those counselled 12 552 (97.4%) were screened for HIV using a rapid test. Men made up 48% of the sample and 76.5% of patients had pulmonary TB. Of the total patients tested, 42 (0.34%) were HIV-positive after confirmatory testing at the Sindh AIDS Control Program Laboratory. Prevalence of HIV among male patients was 0.67% whereas prevalence among female patients was 0.03% (p value <0.001). Prevalence of HIV among pulmonary TB patients was 0.29% and among extrapulmonary TB patients was 0.48% (p value=0.09).
Conclusion: In public DOTS clinics in Pakistan it is feasible to test TB patients for HIV. Prevalence of HIV is three times higher among TB patients as compared with the general population in Pakistan. Although the results are not representative of Pakistan or Sindh province they cover a large catchment area and closely match WHO estimate for the country. Routinely screening all TB patients for HIV infection, especially targeting men and ensuring antiretroviral therapy, can significantly improve TB/HIV collaborative activities in Pakistan and identify many cases of HIV, improve health outcomes and save lives.

Pattern of Sexually Transmitted Infections in Males in Interior Sindh: a 10-year-study

Bhutto, Abdul Manan, et al. "Pattern of sexually transmitted infections in males in interior Sindh: a 10-year-study." *J. Ayub Med. Coll.* 23(3), 110-114 (2011). (Link to Full Article)

Abstract

Background: Sexually transmitted infections (STIs) are widespread in Pakistan and have not been fully documented particularly in Sindh Province. The aim of this study is to determine the number and clinical pattern of various types of STIs in general population of Larkana division and its surrounding cities.

Methods: A hospital based prospective study was carried out at Male-STD-Clinic in the Department of Dermatology, Shaheed Muhtarma Benazir Bhutto Medical University Hospital Larkana from January 2000 to December 2009.

Results: Among 4,288 patients, 3,947 (92.04%) had the history of extra marital sexual contact and simultaneously had developed the clinical signs of STIs; 341 (7.95%) had history of extra marital sexual contact but did not have the manifestation of STIs. Majority of the patients (3,860, 90.01%) had the history of heterosexual contact with different partners, but only few 171 (3.98%) of them had the history of homosexual contact. According the syndromic diagnosis 1930 (45.00%) patients had genital ulcer (including herpes genitals) with or without skin manifestations, 690 (16.09%) had urethral discharge, 431 (10.05%) had genital warts, 349 (8.14%) had lesions other than STIs related, 304 (7.08%) had more than one syndrome, 193 (4.50%) had scrotal swelling, 46 (1.07%) had inguinal bubo, 3 (0.06%) were human immunodeficiency virus (HIV) positive, and 1 (0.02%) had ophthalmia neonatorum. Based on the clinical and etiological grounds: 2560 (59.70%) had syphilis, 640 (14. 92%) had gonorrhoea, 399 (9.30%) had mixed infections, 40 (0.93%) had chancroid, 431 (10.05%) had genital warts, 40 (0.93%) had lymphogranuloma venerum (LGV) and granuloma inguinale (GI), 3 (0.06%) were HIV positive, 208 (4.85%) had genital herpes, 120 (2.79%) had orchitis, 56 (1.30%) had non gonococcal urethritis (chlamydia were 19), and 1 (0.02%) had ophthalmia neonatorum.

Conclusions: Mode of transmission of STIs in this region is mainly by heterosexual contact and syphilis is the commonest followed by gonorrhoea.

Jail Population; a Survey for HBV, HCV and HIV Infections

Nafees, Muhammad, et al. "Jail Population; a survey for HBV, HCV and HIV infections." *The Professional Med. J.* 18(4), 697-702 (2011). (Link to Full Article)

Abstract

Objective: The infections with hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV) are common among prisoners but such data are sparse from Pakistan; hence in this study, we evaluated the sero-prevalence of these three infections among Jail inmates.

Design: Cross-sectional survey.

Setting: Central Jail, Lahore.

Period: May to November 2009.

Methodology: Investigate the seroprevalence of HBV, HCV and HIV infections among the random population of sentenced inmates of Central Jail, Lahore. We examined 3062

jail inmates, 396 of them were females and 2666 males. Majority of the inmates were Pakistani national (97.06 %). All collected blood samples were tested for HIV antibodies, HBsAg, and anti-HCV antibodies with one step chromatographic immunoassay.
Results: Seroprevalence rate of HCV, HBV and HIV infections was 15.31%, 3.46 % and 1.79 % respectively. Overall prevalence of these infections in the jail inmates was 20.57 % and 18.77 % of them were positive for markers of viral hepatitis B/C.
Conclusions: We evaluated that jail inmates in Pakistan had a high incidence of HCV, HBV and HIV infections. Regular testing is required to identify infected prisoners and refer them for appropriate treatment. In addition, general disease prevention efforts are needed to minimize transmission of these viral infections in this subpopulation, before and after release.

Frequency of Dual Tuberculosis/Human Immunodeficiency Virus Infection in Patients presenting at Tertiary Care Centers at Karachi

Memon, Abdul Rauf, et al. "Frequency of dual tuberculosis/human immunodeficiency virus infection in patients presenting at tertiary care centers at Karachi." *J. Coll. Physicians Surg. Pak.* 17(10), 591-593 (2007). (Link to Full Article)

Abstract

Objective: To determine the frequency of dual infection of Tuberculosis and Human Immunodeficiency Virus (HIV) and document the sexual practices of infected patients.
Design: Cross-sectional study.
Place and Duration of Study: Medical Unit-IV of Civil Hospital, Karachi, Pakistan, in collaboration with Sindh AIDS Control Program at Services Hospital, Karachi, from January 2003 to December 2004.
Patients and Methods: Patients were recruited in the study at both centers and tested for both HIV and TB if any one disease was identified. Diagnosis of TB was based on positive sputum AFB smear / caseous granulomatous lesion on histopathology. Diagnosis of HIV was based on positive anti-HIV serology by LISA technique. A questionnaire was also administered to all the study participants regarding demographics, sexual practices, blood transfusion and intravenous drug abuse.
Results: A total of 196 patients of HIV and TB were screened for the presence of dual infection (TB/HIV). Dual infection was present in 38 (19.39%) of patients. Out of 126 patients of HIV, evidence of TB was detected in 38 (30.16%). During the same duration, 70 patients of tuberculosis were screened for HIV and none was tested positive for HIV. History of illicit sexual relationship was found in 121 (96.03%) patients and 5 of these were homosexuals.
Conclusion: Dual infection was present in patients of HIV with TB but vice versa was not documented in this study.

A View of HIV-I Infection in Karachi

Kaiyani, Naila, et al. "A View of HIV-I Infection in Karachi." *J. Pak. Med. Assoc.* 44(1), 8-11 (1994). (Link to Full Article)

Abstract

A prospective study on the prevalence of HIV-l infection in Karachi, Pakistan was conducted over a period of six years (1986-1992). Over 15,000 individual samples and more than 32,000 donor units of individuals residing in Karachi at the time of sample collection were tested for HIV-I infection by our screening test EIA which revealed a positivity rate of 0.23% and 0.003% in individual and donor units respectively by Western Blot. We divided patients into four groups A,B,C and D based on the most plausible cause of transmission. The largest number of positive patients belonged to group B, who were of either foreign origin or expatriates or Pakistanis sett led abroad. They comprised approximately 67% of the total positive cases and were subjected to testing on strong clinical grounds. In individuals of other groups like group A and D, there was history of travel abroad from time to time. The only positive donor unit (group C) belonged to a person who had been living in Middle East for the last 10- 12 years. The last group D comprised of samples that were directly sent to us without complete history, except for the fact that they had been travelling back and forth. The large majority of patients fell in 20- 50 years age group. Despite the limitations of this study, we conclude that the prevalence of HIV is steadily Increasing in our population and so far, we have not been able to find an indigenous case of AIDS in our series (JPMA 44: 8, 1994).